

--	--	--	--	--	--	--	--	--	--

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2022/2023

DBM5624 – PRINCIPLES OF FINANCE

(All Sections / Groups)

14 JULY 2023
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 4 pages with 5 questions.
2. Write your answers in the answer booklet provided.
3. Answer ALL questions.

QUESTION 1**Part A**

In general, financial management decision focus on three main concerns: Briefly explain the working capital management decision and provide **THREE (3)** examples related to this decision. (5 marks)

Part B

1. Frenzy Company reported net sales of RM758,000 and costs of goods sold amounted to RM482,500. The depreciation expense was RM40,600 and the interest on loan was RM10,650.

Required

Determine the amount of the company's operating cash flow if the tax rate is 28%. (6 marks)

2. The followings are the accounting information pertaining to Miramee Company for the year 2022:

	(RM)
Sales revenue	505,700
Production costs	324,400
Operating expenses	45,250
Depreciation expense	21,300
Interest expense	6,440
Tax	18,660
Dividends	40,350

During the year the company issued RM20,000 new equity and has redeemed RM30,500 outstanding long-term debt. If net fixed assets increase by RM15,500 during the year, calculate the addition to net working capital. (9 marks)

(Total: 20 marks)

Continued...

QUESTION 2**Part A**

Mega Land Berhad bonds maturing in 10 years, pay 8 percent of coupon rate on an issuance of RM1,000 par value. The yield to maturity for this bond is 12 percent.

Required

- (a) Calculate the bond price if the bond is compounded semi-annually. (5 marks)
- (b) Calculate the bond price if the bond is compounded annually. With this annual compounding, is the bond selling at par, discount or premium? Justify. (6 marks)
- (c) Calculate the bond's current yield when it is semi-annual compounded. (3 marks)

Part B

Adli has completed his ACCA qualification and has been working with one of the big four accounting firms in Kuala Lumpur. He decided to buy a new car, Proton X50 at the cost of RM93,000. Bumi Bank quotes an interest rate of 12 percent APR for a 84-month loan with 10 percent down payment.

Required

- (a) Calculate monthly payment that Adli needs to pay to the bank. (4 marks)
- (b) Determine the effective interest rate on the loan. (2 marks)

(Total: 20 marks)

Continued...

QUESTION 3

1. Bayu Properties just paid a dividend of RM2.80 per share on its ordinary shares. The dividends are expected to grow at a constant rate of 4.4 percent per year, indefinitely. If investors require a 8 percent return on this stock, what is the current price? What will the price be in 3 years? (6 marks)
2. Imeeeka Company is an IT based company and is growing rapidly as compared to its competitors. Dividends are expected to grow at a 35 percent rate for the next 3 years, with the growth rate falling off to a constant 5.5% thereafter. If the required return is 9 percent and the company just paid a RM3.10 dividend, determine what is the current share price? (8 marks)
3. Sarah will start her saving RM250 per month, by the end of this month, for retirement through her company's retirement plan. Her employer will contribute an additional RM0.50 for every RM1.00 that she saves. If she is employed by this firm for 25 more years and earns an average of 9.5 percent on her retirement savings, how much will she have in her retirement account 25 years from now? (6 marks)

(Total: 20 marks)**QUESTION 4****Part A**

Lime Berhad is analysing two mutually exclusive projects, Project X and Project Y. Each project has a cost of RM20,000. Required rate of return is 12%. The projects' expected net cash flow are as follows:

Year	Cash Flow (Project X) (RM)	Cash Flow (Project Y) (RM)
0	-20,000	-20,000
1	11,000	14,000
2	7,500	5,500
3	6,500	8,800
4	3,500	1,500

Required

- (a) Calculate Net Present Value (NPV) for both projects. (4 marks)
- (b) Calculate Profitability Index (PI) for both projects. (8 marks)
- (c) What is the payback period for both projects. (6 marks)

Continued...

- (d) Which project should the company accept? Why? (2 marks)

(Total: 20 marks)

QUESTION 5

Part A

Cinemax Berhad has just paid a cash dividend of RM8 per share. Investors require a 20 percent return from investments. Dividend is expected to grow at a constant rate of 10 percent per year.

Required

- (a) Determine the current value of the stock? (3 marks)
- (b) What will the stock be worth in ten (10) years? (3 marks)
- (c) What would stock of Cinemax Berhad sell for today if the growth rate expected to grow at 30 percent per year for the next five (5) years and then constant to 10 percent per year indefinitely? (Assume that just paid dividend and required rate of return are same). (9 marks)

Part B

Animax Berhad has a beta of 0.8. The market risk premium is 8 percent and risk-free rate is 9 percent. Animax Berhad has just paid a dividend of RM2 per share and the dividend is expected to grow at 8 percent indefinitely. The stock currently sells for RM30.

Required

- (a) Calculate the cost of equity if the company uses Security Market Line (SML) method? (2 marks)
- (b) Determine the cost of equity if the company uses dividend growth method? (2 marks)
- (c) Calculate the cost of equity? (1 mark)

(Total: 20 marks)

End of Paper

FORMULAE APPENDIX

I. Finding the value of a bond

$$\text{Bond value} = C \times [1 - 1/(1 + r)^t]/r + F/(1 + r)^t$$

where

C = Coupon paid each period

r = Rate per period

t = Number of periods

F = Bond's face value

II. Finding the yield on a bond

Given a bond value, coupon, time to maturity, and face value, it is possible to find the implicit discount rate, or yield to maturity, by trial and error only. To do this, try different discount rates in the formula above until the calculated bond value equals the given bond value. Remember that increasing the rate decreases the bond value.

I. Symbols:

PV = Present value, what future cash flows are worth today

FV_{*t*} = Future value, what cash flows are worth in the future

r = Interest rate, rate of return, or discount rate per period—typically, but not always, one year

t = Number of periods—typically, but not always, the number of years

C = Cash amount

II. Future Value of C Invested at r Percent for t Periods:

$$FV_t = C \times (1 + r)^t$$

The term $(1 + r)^t$ is called the *future value factor*.

III. Present Value of C to Be Received in t Periods at r Percent per Period:

$$PV = C/(1 + r)^t$$

The term $1/(1 + r)^t$ is called the *present value factor*.

IV. The Basic Present Value Equation Giving the Relationship between Present Value and Future Value:

$$PV = FV_t/(1 + r)^t$$

I. The cash flow identity

$$\text{Cash flow from assets} = \text{Cash flow to creditors (bondholders)} + \text{Cash flow to stockholders (owners)}$$

II. Cash flow from assets

$$\begin{aligned} \text{Cash flow from assets} &= \text{Operating cash flow} \\ &\quad - \text{Net capital spending} \\ &\quad - \text{Change in net working capital (NWC)} \end{aligned}$$

where:

$$\begin{aligned} \text{Operating cash flow} &= \text{Earnings before interest and taxes (EBIT)} \\ &\quad + \text{Depreciation} - \text{Taxes} \end{aligned}$$

$$\begin{aligned} \text{Net capital spending} &= \text{Ending net fixed assets} \\ &\quad - \text{Beginning net fixed assets} + \text{Depreciation} \end{aligned}$$

$$\text{Change in NWC} = \text{Ending NWC} - \text{Beginning NWC}$$

III. Cash flow to creditors (bondholders)

$$\text{Cash flow to creditors} = \text{Interest paid} - \text{Net new borrowing}$$

IV. Cash flow to stockholders (owners)

$$\text{Cash flow to stockholders} = \text{Dividends paid} - \text{Net new equity raised}$$

I. The general case

In general, the price today of a share of stock, P_0 , is the present value of all of its future dividends, $D_1, D_2, D_3, \dots$:

$$P_0 = \frac{D_1}{(1+R)^1} + \frac{D_2}{(1+R)^2} + \frac{D_3}{(1+R)^3} + \dots$$

where R is the required return.

II. Constant growth case

If the dividend is constant and equal to D , then the price can be written as:

$$P_0 = \frac{D}{R}$$

If the dividend grows at a steady rate, g , then the price can be written as:

$$P_0 = \frac{D_1}{R - g}$$

This result is called the *dividend growth model*.

III. Nonconstant Growth

If the dividend grows steadily after t periods, then the price can be written as:

$$P_0 = \frac{D_1}{(1+R)^1} + \frac{D_2}{(1+R)^2} + \dots + \frac{D_t}{(1+R)^t} + \frac{P_t}{(1+R)^t}$$

where

$$P_t = \frac{D_t \times (1+g)}{(R - g)}$$

IV. Valuation Using Multiples

For stocks that don't pay dividends (or have erratic dividend growth rates), we can value them using the PE ratio and/or the price-sales ratio:

$$P_t = \text{Benchmark PE ratio} \times \text{EPS}_t$$

$$P_t = \text{Benchmark price-sales ratio} \times \text{Sales per share}_t$$

V. The required return, R , can be written as the sum of two things:

$$R = D_1/P_0 + g$$

where D_1/P_0 is the *dividend yield* and g is the *capital gains yield* (which is the same thing as the growth rate in dividends for the steady growth case).

I. The cost of equity, R_E

A. Dividend growth model approach (from Chapter 7):

$$R_E = D_1/P_0 + g$$

where D_1 is the expected dividend in one period, g is the dividend growth rate, and P_0 is the current stock price.

B. SML approach (from Chapter 11):

$$R_E = R_f + \beta_E \times (R_M - R_f)$$

where R_f is the risk-free rate, R_M is the expected return on the overall market, and β_E is the systematic risk of the equity.

II. The cost of debt, R_D

A. For a firm with publicly held debt, the cost of debt can be measured as the yield to maturity on the outstanding debt. The coupon rate is irrelevant. Yield to maturity is covered in Chapter 6.

B. If the firm has no publicly traded debt, then the cost of debt can be measured as the yield to maturity on similarly rated bonds (bond ratings are discussed in Chapter 6).

III. The weighted average cost of capital, WACC

A. The firm's WACC is the overall required return on the firm as a whole. It is the appropriate discount rate to use for cash flows similar in risk to the overall firm.

B. The WACC is calculated as:

$$WACC = (E/V) \times R_E + (D/V) \times R_D \times (1 - T_c)$$

where T_c is the corporate tax rate, E is the market value of the firm's equity, D is the market value of the firm's debt, and $V = E + D$. Note that E/V is the percentage of the firm's financing (in market value terms) that is equity, and D/V is the percentage that is debt.